

FIG. 1

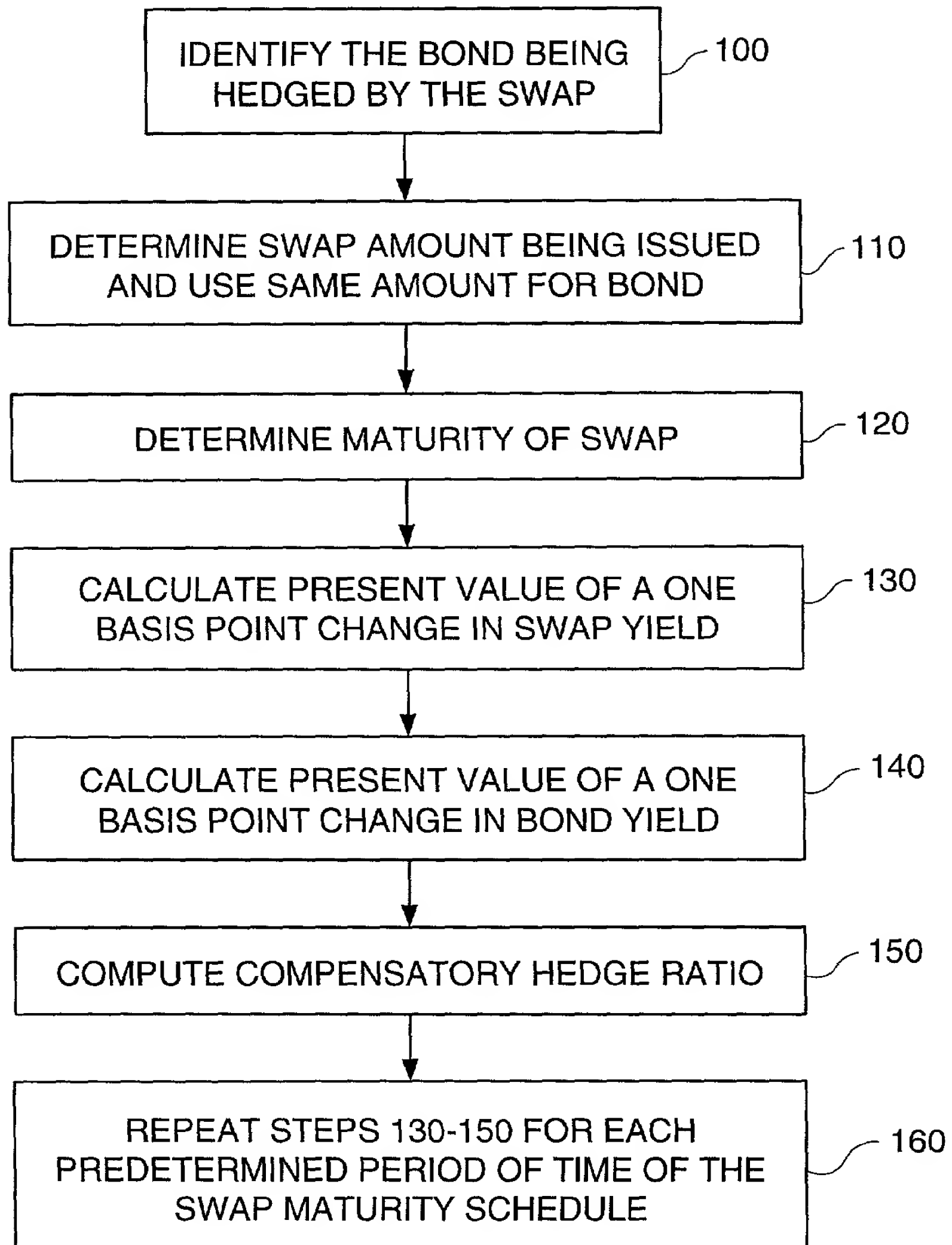


Fig - 2 -

210

220

VALUE OF 1 BP
AT INITIAL DATE

VALUE OF 1 BP
WITH 12 MONTHS REMAINING

EXHIBIT 1

4 Year Swap

\$36,125

\$ 9,730

4 Year Bond

\$36,185

\$ 9,734

EXHIBIT 2

5 Year Swap

\$46,546

\$ 9,726

7 Year Bond

\$65,181

\$27,313

EXHIBIT 3

6 Year Swap

\$56,887

\$ 9,726

8 Year Bond

\$64,013

\$23,052

EXHIBIT 4

7 Year Swap

\$54,921

\$ 9,653

10 Year Bond

\$71,574

\$36,005

240

250

HEDGE RATIO
AT INITIAL DATE

HEDGE RATIO
WITH 12 MONTHS REMAINING

EXHIBIT 1

99.8% (\$36,125 / \$36,185)

100.0% (\$9,730 / \$9,734)

EXHIBIT 2

71.4% (\$46,546 / \$65,181)

35.6% (\$27,313 / \$9,726)

EXHIBIT 3

88.9% (\$56,887 / \$64,013)

42.2% (\$9,726 / \$23,052)

EXHIBIT 4

76.7% (\$54,921 / \$71,574)

26.8% (\$9,653 / \$36,005)

FIG - 3 -

CALCULATION OF THE COMPENSATORY HEDGE RATIO

330		335	340	345	315	355	360	365	370	375
Swap Notional		\$100,000,000	Initial pay rate	Adj. pay rate	Bond (nominal):			\$100,000,000		
Receive Rate		5.153%	5.15%	5.16%	Bond (coupon interest rate):			9.000%		
320	No. of Months	PV of Profit	V of Adj. Profit	PV of 1 BP	No. of Months	PV at Initial Bond Yield 5.710%	PV at Initial Bond Yield 5.720%	PV of 1 BP	Compensatory Hedge Ratio	
4-Jan-99						\$101,813,328	\$101,777,143			
31-Jan-99	48	\$0	-\$36,125	\$36,125	48	\$101,813,328	\$101,777,143	\$36,185	99.8%	
feb	47	\$0	-\$35,445	\$35,445	47	\$101,779,464	\$101,743,961	\$35,502	99.8%	
mar	46	\$0	-\$34,762	\$34,762	46	\$101,745,444	\$101,710,627	\$34,817	99.8%	
apr	45	\$0	-\$34,076	\$34,076	45	\$101,711,269	\$101,677,140	\$34,129	99.8%	
may	44	\$0	-\$33,387	\$33,387	44	\$101,676,937	\$101,643,499	\$33,438	99.8%	
jun	43	\$0	-\$32,695	\$32,695	43	\$101,642,448	\$101,609,704	\$32,744	99.9%	
jul	42	\$0	-\$32,000	\$32,000	42	\$101,607,801	\$101,575,754	\$32,047	99.9%	
aug	41	\$0	-\$31,303	\$31,303	41	\$101,572,995	\$101,541,648	\$31,347	99.9%	
sep	40	\$0	-\$30,602	\$30,602	40	\$101,538,030	\$101,507,385	\$30,645	99.9%	
oct	39	\$0	-\$29,898	\$29,898	39	\$101,502,905	\$101,472,966	\$29,939	99.9%	
nov	38	\$0	-\$29,192	\$29,192	38	\$101,467,619	\$101,438,389	\$29,230	99.9%	
dec	37	\$0	-\$28,482	\$28,482	37	\$101,432,172	\$101,403,653	\$28,519	99.9%	
jan 2000	36	\$0	-\$27,769	\$27,769	36	\$101,396,562	\$101,368,757	\$27,805	99.9%	
feb	35	\$0	-\$27,054	\$27,054	35	\$101,360,789	\$101,333,702	\$27,087	99.9%	
mar	34	\$0	-\$26,335	\$26,335	34	\$101,324,853	\$101,298,486	\$26,367	99.9%	
apr	33	\$0	-\$25,613	\$25,613	33	\$101,288,752	\$101,263,108	\$25,643	99.9%	
may	32	\$0	-\$24,888	\$24,888	32	\$101,252,485	\$101,227,569	\$24,917	99.9%	
jun	31	\$0	-\$24,161	\$24,161	31	\$101,216,053	\$101,191,866	\$24,187	99.9%	
jul	30	\$0	-\$23,430	\$23,430	30	\$101,179,454	\$101,155,999	\$23,455	99.9%	
aug	29	\$0	-\$22,696	\$22,696	29	\$101,142,687	\$101,119,968	\$22,719	99.9%	
sep	28	\$0	-\$21,958	\$21,958	28	\$101,105,752	\$101,083,771	\$21,980	99.9%	
oct	27	\$0	-\$21,218	\$21,218	27	\$101,068,648	\$101,047,409	\$21,239	99.9%	
nov	26	\$0	-\$20,475	\$20,475	26	\$101,031,374	\$101,010,880	\$20,494	99.9%	
dec	25	\$0	-\$19,728	\$19,728	25	\$100,993,929	\$100,974,183	\$19,746	99.9%	
jan 2001	24	\$0	-\$18,978	\$18,978	24	\$100,956,313	\$100,937,318	\$18,995	99.9%	
feb	23	\$0	-\$18,226	\$18,226	23	\$100,918,525	\$100,900,284	\$18,241	99.9%	
mar	22	\$0	-\$17,469	\$17,469	22	\$100,880,563	\$100,863,080	\$17,483	99.9%	
apr	21	\$0	-\$16,710	\$16,710	21	\$100,842,428	\$100,825,705	\$16,723	99.9%	
may	20	\$0	-\$15,948	\$15,948	20	\$100,804,118	\$100,788,159	\$15,959	99.9%	
jun	19	\$0	-\$15,182	\$15,182	19	\$100,765,633	\$100,750,441	\$15,192	99.9%	
jul	18	\$0	-\$14,413	\$14,413	18	\$100,726,972	\$100,712,549	\$14,422	99.9%	
aug	17	\$0	-\$13,641	\$13,641	17	\$100,688,133	\$100,674,484	\$13,649	99.9%	
sep	16	\$0	-\$12,865	\$12,865	16	\$100,649,117	\$100,636,245	\$12,873	99.9%	
oct	15	\$0	-\$12,086	\$12,086	15	\$100,609,922	\$100,597,829	\$12,093	99.9%	
nov	14	\$0	-\$11,304	\$11,304	14	\$100,570,548	\$100,559,238	\$11,310	99.9%	
dec	13	\$0	-\$10,519	\$10,519	13	\$100,530,994	\$100,520,470	\$10,524	100.0%	
jan 2002	12	\$0	-\$9,730	\$9,730	12	\$100,491,258	\$100,481,524	\$9,734	100.0%	
feb	11	\$0	-\$8,938	\$8,938	11	\$100,451,341	\$100,442,399	\$8,942	100.0%	
mar	10	\$0	-\$8,142	\$8,142	10	\$100,411,240	\$100,403,095	\$8,146	100.0%	
apr	9	\$0	-\$7,344	\$7,344	9	\$100,370,956	\$100,363,610	\$7,346	100.0%	
may	8	\$0	-\$6,541	\$6,541	8	\$100,330,488	\$100,323,945	\$6,543	100.0%	
jun	7	\$0	-\$5,736	\$5,736	7	\$100,289,835	\$100,284,097	\$5,737	100.0%	
jul	6	\$0	-\$4,927	\$4,927	6	\$100,248,995	\$100,244,067	\$4,928	100.0%	
aug	5	\$0	-\$4,114	\$4,114	5	\$100,207,968	\$100,203,853	\$4,115	100.0%	
sep	4	\$0	-\$3,298	\$3,298	4	\$100,166,754	\$100,163,455	\$3,299	100.0%	
oct	3	\$0	-\$2,479	\$2,479	3	\$100,125,350	\$100,122,871	\$2,479	100.0%	
nov	2	\$0	-\$1,656	\$1,656	2	\$100,083,758	\$100,082,101	\$1,656	100.0%	
dec	1	\$0	-\$830	\$830	1	\$100,041,974	\$100,041,145	\$830	100.0%	
jan 2003	0	\$0	\$0	\$0	0	\$100,000,000	\$100,000,000	\$0	#DIV/0!	

FIG - 4 -

CALCULATION OF THE CORRELATION BETWEEN SWAP AND RATIO HEDGE BOND

405	410	415	420	425	430	435	440	445	450
Swap Notional Receive Rate	\$100,000,000 6.088%	Hypothetical Rate 5.085%	Actual month-end CP Rate	Using CP at month end + 18 bps	Settlement on 13-feb-00 annual No. of days of accrued interest	Market Yield (Updated)	Accrued Interest	Adjusted MTM (excl. accrued int.)	Monthly Change Adj. MTM
407	No. of Months	(Per Counterparty) Swap MTM		Actual floating rate					
4-Jan-99							\$0	\$0	
31-Jan-99	48	\$54,204				5.070%	\$0	\$54,204	\$54,204
	47	-\$2,034,749				5.666%	\$0	-\$2,034,749	-\$2,088,953
	46	-\$1,520,311				5.526%	\$0	-\$1,520,311	\$514,438
apr	45	-\$1,729,948				5.598%	\$0	-\$1,729,948	-\$209,637
	44	-\$3,004,878				6.000%	\$0	-\$3,004,878	-\$1,274,930
	43	-\$3,316,377				6.118%	\$0	-\$3,316,377	-\$311,499
jul	42	-\$4,021,892				6.370%	\$0	-\$4,021,892	-\$705,516
-1,304,646	41	-\$4,324,921	5.17%	5.35%	199	6.500%	\$402,089	-\$4,324,921	-\$303,028
	40	-\$483,623	5.28%	5.46%	229		\$393,692	-\$877,315	\$829,420
oct	39	-\$654,383	5.28%	5.46%	260		\$447,342	-\$1,101,725	-\$224,411
	38	-\$1,094,034	5.37%	5.55%	290		\$427,055	-\$1,521,089	-\$419,363
	37	-\$1,704,862	5.55%	5.73%	321		\$314,404	-\$2,019,266	-\$498,177
jan 2000	36	-\$2,641,451	5.59%	5.77%	352		\$306,192	-\$2,947,643	-\$928,377
	35	-\$2,931,088	5.76%	5.94%	15		\$6,062	-\$2,937,150	\$10,493
	34	-\$2,916,663	5.93%	6.11%	48		-\$2,836	-\$2,913,827	\$23,322
apr	33	-\$3,243,567	6.02%	6.20%	76		-\$23,425	-\$3,220,142	-\$306,315
	32	-\$3,742,970	6.40%	6.58%	107		-\$144,377	-\$3,598,593	-\$378,451
	31	-\$2,808,153	6.53%	6.71%	137		-\$233,651	-\$2,574,502	-\$1,024,091
jul	30	-\$2,582,067	6.49%	6.67%	168		-\$268,110	-\$2,313,957	\$260,545
	29	-\$2,142,443	6.47%	6.65%	199		-\$306,678	-\$1,835,765	\$478,192
	28	-\$1,653,990	6.48%	6.66%	229		-\$361,067	-\$1,292,923	\$542,842
oct	27	-\$1,558,893	6.48%	6.66%	260		-\$404,752	-\$1,154,141	\$138,782
455	460								
Bond (nominal):		\$100,000,000							
Bond (coupon interest rate):		6.000%							
	No. of Months	Computed Bond Value	Actual Libor Swap Yield	Constant Yield Differential	Constant Diff. Libor vs CP Swap	Effective Swap Yield	Bond Price If Yield Unchanged	Amort of Premium	Bond Value Mthly Change
	49	102.2165%	5.1850%	0.3090%	0.1000%	5.3940%	102.216%		
	48	102.2305%	5.1700%	0.3090%	0.1000%	5.3790%	102.176%	0.041%	\$54,516
	47	100.0906%	5.7650%	0.3090%	0.1000%	5.9740%	102.135%	0.041%	-\$2,099,155
	46	100.5631%	5.6267%	0.3090%	0.1000%	5.8357%	102.094%	0.041%	\$513,427
	45	100.3138%	5.6975%	0.3090%	0.1000%	5.9065%	102.053%	0.041%	-\$208,216
	44	98.9909%	6.1000%	0.3090%	0.1000%	6.3090%	102.012%	0.041%	-\$1,281,692
	43	98.6356%	6.2183%	0.3090%	0.1000%	6.4273%	101.971%	0.041%	-\$313,783
	42	97.8861%	6.4700%	0.3090%	0.1000%	6.6790%	101.929%	0.042%	-\$707,924
	41	97.5401%	6.6000%	0.3090%	0.1000%	6.8090%	101.887%	0.042%	-\$304,141
	40	98.2810%	6.3667%	0.3090%	0.1000%	6.5757%	101.845%	0.042%	\$782,898
	39	98.2088%	6.4050%	0.3090%	0.1000%	6.6140%	101.803%	0.042%	-\$29,939
	38	97.8370%	6.5517%	0.3090%	0.1000%	6.7607%	101.760%	0.042%	-\$329,444
	37	97.0326%	6.8650%	0.3090%	0.1000%	7.0740%	101.718%	0.043%	-\$761,811
	36	96.0365%	7.2700%	0.3090%	0.1000%	7.4790%	101.675%	0.043%	-\$953,259
	35	96.4051%	7.1646%	0.3090%	0.1000%	7.3736%	101.632%	0.043%	\$411,502
	34	96.4464%	7.1850%	0.3090%	0.1000%	7.3940%	101.589%	0.043%	\$84,538
	33	96.2018%	7.3245%	0.3090%	0.1000%	7.5335%	101.546%	0.043%	-\$201,328
	32	95.7838%	7.5463%	0.3090%	0.1000%	7.7553%	101.502%	0.044%	-\$374,454
	31	96.7345%	7.1835%	0.3090%	0.1000%	7.3925%	101.458%	0.044%	\$994,454
	30	97.0218%	7.0980%	0.3090%	0.1000%	7.3070%	101.414%	0.044%	\$331,314
	29	97.5728%	6.8869%	0.3090%	0.1000%	7.0959%	101.370%	0.044%	\$595,100
	28	98.0661%	6.6907%	0.3090%	0.1000%	6.8997%	101.326%	0.044%	\$537,645
	27	98.2559%	6.6295%	0.3090%	0.1000%	6.8385%	101.281%	0.045%	\$234,395

HS-S-

505	510	515	520	525	530	535	540	545	550
	Bond Value Mthly Change	Compensatory Hedge Ratio	X Hedged Bond MTM mthly change (24'25)	avg. x Life-to-date Hedged Bond MTM mthly change	Y Swap MTM Mthly Change	Ineffective Portion of Swap MTM (26-27) Y minus X	Square of Total Deviation SST	Square of Unexplained Dev (Ineffect portion) SSE	r ²
31-Jan-99	\$54,516	99.8%	\$54,427	\$54,427	\$54,204	\$223	49,628	49,628	0.0%
	-\$2,099,155	99.8%	-\$2,095,772	-\$1,020,673	-\$2,088,953	-\$6,819	2,296,582,289,735	46,500,279	100.0%
apr	\$513,427	99.8%	\$512,616	-\$509,577	\$514,438	-\$1,822	3,860,883,517,609	3,321,108	100.0%
	-\$208,216	99.8%	-\$207,894	-\$434,156	-\$209,637	\$1,743	3,927,087,283,599	3,038,583	100.0%
	-\$1,281,692	99.8%	-\$1,279,746	-\$603,274	-\$1,274,930	-\$4,816	4,494,871,176,593	23,193,636	100.0%
Jul	-\$313,783	99.9%	-\$313,316	-\$554,948	-\$311,499	-\$1,818	4,564,704,923,005	3,303,776	100.0%
	-\$707,924	99.9%	-\$706,894	-\$576,654	-\$705,516	-\$1,378	4,584,715,078,924	1,898,274	100.0%
	-\$304,141	99.9%	-\$303,708	-\$542,536	-\$303,028	-\$680	4,649,225,115,759	462,382	100.0%
oct	\$782,898	99.9%	\$781,809	-\$395,387	\$829,420	-\$47,611	6,318,077,971,286	2,266,835,661	100.0%
	-\$29,939	99.9%	-\$29,898	-\$358,838	-\$224,411	\$194,512	6,343,567,383,582	37,835,080,591	99.4%
	-\$329,444	99.9%	-\$329,007	-\$356,126	-\$419,363	\$90,357	6,348,353,334,280	8,164,333,782	99.2%
	-\$761,811	99.9%	-\$760,824	-\$389,851	-\$498,177	-\$262,647	6,357,632,550,455	68,983,260,696	98.2%
jan 2000	-\$953,259	99.9%	-\$952,054	-\$433,097	-\$928,377	-\$23,678	6,628,902,567,665	560,639,095	98.2%
	\$411,502	99.9%	\$410,995	-\$372,805	\$10,493	\$400,502	6,815,307,260,336	160,401,736,247	95.9%
	\$84,538	99.9%	\$84,437	-\$342,322	\$23,322	\$61,115	6,982,500,378,558	3,734,985,049	96.0%
apr	-\$201,328	99.9%	-\$201,093	-\$333,495	-\$306,315	\$105,222	6,991,419,564,006	11,071,702,716	95.8%
	-\$374,454	99.9%	-\$374,029	-\$335,880	-\$378,451	-\$30,732	6,990,927,028,279	19,551,826	96.7%
	\$994,454	99.9%	\$993,359	-\$262,033	-\$1,024,091	-\$30,732	8,812,603,041,850	944,476,775	96.7%
Jul	\$331,314	99.9%	\$330,960	-\$230,823	\$260,545	\$70,415	9,101,296,600,373	4,958,338,806	96.8%
	\$595,100	99.9%	\$594,484	-\$189,557	\$478,192	\$116,291	9,824,644,168,383	13,523,688,684	96.8%
oct	\$537,645	99.9%	\$537,106	-\$154,954	\$542,842	-\$5,736	10,181,381,367,533	32,898,234	96.9%
	\$234,395	99.9%	\$234,168	-\$137,267	\$138,782	\$95,385	10,287,397,783,867	9,098,368,619	96.9%

	630	635	640	645	625	655	660	665	670	675
	Swap Notional Receive Rate	\$100,000,000 5.153%	Initial pay rate 5.15%	Adj. pay rate 5.16%		Bond (nominal): Bond (coupon interest rate):		\$100,000,000 9.000%		
620	No. of Months	PV of Profit	V of Adj. Profit	PV of 1 BP	No. of Months	PV at Initial Bond Yield 5.710%	PV at Initial Bond Yield 5.720%	PV of 1 BP	Compensatory Hedge Ratio	
4-Jan-99						\$119,312,749	\$119,247,568			
31-Jan-99	64	\$0	-\$46,546	\$46,546	86	\$119,312,749	\$119,247,568	\$65,181	71.4%	
feb	63	\$0	-\$45,913	\$45,913	85	\$119,130,478	\$119,065,981	\$64,497	71.2%	
mar	62	\$0	-\$45,276	\$45,276	84	\$118,947,341	\$118,883,529	\$63,812	71.0%	
apr	61	\$0	-\$44,638	\$44,638	83	\$118,763,332	\$118,700,207	\$63,125	70.7%	
may	60	\$0	-\$43,996	\$43,996	82	\$118,578,448	\$118,516,012	\$62,436	70.5%	
jun	59	\$0	-\$43,351	\$43,351	81	\$118,392,683	\$118,330,938	\$61,745	70.2%	
jul	58	\$0	-\$42,704	\$42,704	80	\$118,206,035	\$118,144,982	\$61,053	69.9%	
aug	57	\$0	-\$42,054	\$42,054	79	\$118,018,499	\$117,958,140	\$60,359	69.7%	
sep	56	\$0	-\$41,401	\$41,401	78	\$117,830,070	\$117,770,407	\$59,663	69.4%	
oct	55	\$0	-\$40,746	\$40,746	77	\$117,640,745	\$117,581,779	\$58,966	69.1%	
nov	54	\$0	-\$40,088	\$40,088	76	\$117,450,519	\$117,392,253	\$58,266	68.8%	
dec	53	\$0	-\$39,426	\$39,426	75	\$117,259,388	\$117,201,822	\$57,565	68.5%	
jan 2000	52	\$0	-\$38,762	\$38,762	74	\$117,067,347	\$117,010,484	\$56,863	68.2%	
feb	51	\$0	-\$38,095	\$38,095	73	\$116,874,392	\$116,818,234	\$56,158	67.8%	
mar	50	\$0	-\$37,426	\$37,426	72	\$116,680,520	\$116,625,068	\$55,452	67.5%	
apr	49	\$0	-\$36,753	\$36,753	71	\$116,485,724	\$116,430,981	\$54,744	67.1%	
may	48	\$0	-\$36,077	\$36,077	70	\$116,290,002	\$116,235,968	\$54,034	66.8%	
jun	47	\$0	-\$35,399	\$35,399	69	\$116,093,349	\$116,040,026	\$53,322	66.4%	
jul	46	\$0	-\$34,718	\$34,718	68	\$115,895,760	\$115,843,151	\$52,609	66.0%	
aug	45	\$0	-\$34,033	\$34,033	67	\$115,697,230	\$115,645,336	\$51,894	65.6%	
sep	44	\$0	-\$33,346	\$33,346	66	\$115,497,756	\$115,446,579	\$51,177	65.2%	
oct	43	\$0	-\$32,656	\$32,656	65	\$115,297,333	\$115,246,874	\$50,459	64.7%	
nov	42	\$0	-\$31,963	\$31,963	64	\$115,095,956	\$115,046,218	\$49,739	64.3%	
dec	41	\$0	-\$31,267	\$31,267	63	\$114,893,621	\$114,844,605	\$49,016	63.8%	
jan 2001	40	\$0	-\$30,568	\$30,568	62	\$114,690,323	\$114,642,031	\$48,293	63.3%	
feb	39	\$0	-\$29,866	\$29,866	61	\$114,486,058	\$114,438,491	\$47,567	62.8%	
mar	38	\$0	-\$29,161	\$29,161	60	\$114,280,821	\$114,233,981	\$46,840	62.3%	
apr	37	\$0	-\$28,452	\$28,452	59	\$114,074,607	\$114,028,497	\$46,111	61.7%	
may	36	\$0	-\$27,741	\$27,741	58	\$113,867,412	\$113,822,032	\$45,380	61.1%	
jun	35	\$0	-\$27,027	\$27,027	57	\$113,659,231	\$113,614,584	\$44,647	60.5%	
jul	34	\$0	-\$26,310	\$26,310	56	\$113,450,060	\$113,406,147	\$43,913	59.9%	
aug	33	\$0	-\$25,589	\$25,589	55	\$113,239,893	\$113,196,716	\$43,177	59.3%	
sep	32	\$0	-\$24,866	\$24,866	54	\$113,028,726	\$112,986,287	\$42,439	58.6%	
oct	31	\$0	-\$24,139	\$24,139	53	\$112,816,555	\$112,774,855	\$41,699	57.9%	
nov										

Fig - 7 -

CALCULATION OF THE CORRELATION BETWEEN SWAP AND RATIO HEDGE BOND

705	710	715	720	725	730	735	740	745	750
Swap Notional Receive Rate	\$100,000,000 6.330%	Hypothetical Rate 5.153%	Actual month-end CP Rate	Using CP at month end + 18 bps	Settlement on 4-Jan 4-Dec No. of days of accrued interest	Market Yield (Updated)	Accrued Interest	Adjusted MTM (excl. accrued int.)	Monthly Change Adj. MTM
707	No. of Months	(Per Counterparty) Swap MTM		Actual floating rate					
4-Jan-99							\$0	\$0	
31-Jan-99	64	\$100,130				5.131%	\$0	\$100,130	\$100,130
feb	63	-\$2,635,277				5.735%	\$0	-\$2,635,277	-\$2,735,407
mar	62	-\$2,246,806				5.655%	\$0	-\$2,246,806	\$388,471
apr	61	-\$2,454,704				5.710%	\$0	-\$2,454,704	-\$207,898
may	60	-\$4,133,168				6.114%	\$0	-\$4,133,168	-\$1,678,464
jun	59	-\$4,676,571				6.260%	\$0	-\$4,676,571	-\$543,403
jul	58	-\$5,616,308				6.510%	\$0	-\$5,616,308	-\$939,737
aug	57	-\$5,671,792				6.545%	\$0	-\$5,671,792	-\$55,484
sep	56	-\$5,079,937	5.29%	5.47%	118	6.415%	\$279,579	-\$5,079,937	\$591,855
oct	55	-\$376,000	5.28%	5.46%	149	6.426%	\$355,069	-\$731,069	\$1,510
nov	54	-\$883,000	5.36%	5.54%	179	6.539%	\$387,327	-\$1,270,327	-\$539,258
dec	53	-\$2,220,000	6.01%	6.19%	27		\$10,553	-\$2,230,553	-\$960,226
jan 2000	52	-\$3,485,000	5.59%	5.77%	58	Hypothetical Market Yield Source: Historical Yield curve) - adjusted for the no. of months ie. 3yr + 5 months Subtract 10 bp - diff between Libor & CP.	\$88,319	-\$3,573,319	-\$1,342,766
feb	51	-\$2,978,000	5.76%	5.94%	86		\$92,315	-\$3,070,315	\$503,004
mar	50	-\$2,758,000	5.93%	6.11%	117		\$70,735	-\$2,828,735	\$241,579
apr	49	-\$3,243,000	6.02%	6.20%	147		\$52,477	-\$3,295,477	-\$466,742
may	48	-\$3,911,000	6.40%	6.58%	178		-\$121,796	-\$3,789,204	-\$493,727
jun	47	-\$2,685,000	6.53%	6.71%	26		-\$27,342	-\$2,657,658	\$1,131,546
jul	46	-\$2,458,000	6.49%	6.67%	57		-\$53,127	-\$2,404,873	\$252,785
aug	45	-\$2,151,000	6.47%	6.65%	88		-\$78,351	-\$2,072,649	\$332,224
sep	44	-\$1,105,000	6.48%	6.66%	118		-\$107,719	-\$997,281	\$1,075,368
oct	43	-\$1,010,000	6.48%	6.66%	149		-\$133,043	-\$876,957	\$120,323
755	760	765	770	775	780	785	790	795	
Bond (nominal):		\$100,000,000							
Bond (coupon interest rate):		9.000%							
No. of Months	Computed Bond Value	Actual Libor Swap Yield	Constant Yield Differential	Constant Diff. Libor vs CP Swap	Effective Swap Yield	Bond Price If Yield Unchanged	Amort of Premium	Bond Value Monthly Change	
87	120.155%	5.3092%	0.4008%	0.1000%	5.6100%	120.155%			
86	120.060%	5.2950%	0.4008%	0.1000%	5.5958%	119.967%	0.188%	\$93,236	
85	115.934%	5.9128%	0.4008%	0.1000%	6.2136%	119.778%	0.189%	-\$3,937,361	
84	116.111%	5.8600%	0.4008%	0.1000%	6.1608%	119.588%	0.190%	\$367,259	
83	115.620%	5.9150%	0.4008%	0.1000%	6.2158%	119.397%	0.191%	-\$299,915	
82	113.157%	6.3017%	0.4008%	0.1000%	6.6025%	119.205%	0.192%	-\$2,271,255	
81	112.080%	6.4650%	0.4008%	0.1000%	6.7658%	119.012%	0.193%	-\$884,397	
80	110.466%	6.7283%	0.4008%	0.1000%	7.0291%	118.819%	0.194%	-\$1,420,017	
79	109.710%	6.8458%	0.4008%	0.1000%	7.1466%	118.624%	0.195%	-\$561,230	
78	110.679%	6.6525%	0.4008%	0.1000%	6.9533%	118.429%	0.195%	\$1,163,790	
77	110.870%	6.5979%	0.4008%	0.1000%	6.8987%	118.232%	0.196%	\$387,414	
76	110.132%	6.7133%	0.4008%	0.1000%	7.0141%	118.035%	0.197%	-\$540,793	
75	108.454%	7.0100%	0.4008%	0.1000%	7.3108%	117.837%	0.198%	-\$1,479,432	
74	106.216%	7.4288%	0.4008%	0.1000%	7.7296%	117.638%	0.199%	-\$2,039,216	
73	106.661%	7.3272%	0.4008%	0.1000%	7.6280%	117.438%	0.200%	\$645,187	
72	107.113%	7.2225%	0.4008%	0.1000%	7.5233%	117.237%	0.201%	\$652,614	
71	106.369%	7.3571%	0.4008%	0.1000%	7.6579%	117.035%	0.202%	-\$541,433	
70	105.098%	7.6054%	0.4008%	0.1000%	7.9062%	116.832%	0.203%	-\$1,068,100	
69	106.953%	7.2065%	0.4008%	0.1000%	7.5073%	116.628%	0.204%	\$2,058,742	
68	107.079%	7.1633%	0.4008%	0.1000%	7.4641%	116.423%	0.205%	\$330,892	
67	108.160%	6.9190%	0.4008%	0.1000%	7.2198%	116.218%	0.206%	\$1,286,669	
66	108.791%	6.7655%	0.4008%	0.1000%	7.0663%	116.011%	0.207%	\$837,482	
65	108.808%	6.7388%	0.4008%	0.1000%	7.0396%	115.803%	0.208%	\$224,176	

805	810	815	820	825	830	835	840	845	850
	Bond Value Mthly Change	Compensatory Hedge Ratio	Hedged Bond MTM mthly change (24'25)	averg. x Life-to-date Hedged Bond MTM mthly change	Y Swap MTM Mthly Change	Ineffective Portion of Swap MTM (26-27) Y minus X	Square of Total Deviation SST	Square of Unexplained Dev (ineffect portion) SSE	r ²
31-Jan-99	\$93,236	71.4%	\$66,581	\$66,581	\$100,130	-\$33,548	1,125,500,380	1,125,500,380	0.0%
feb	-\$3,937,361	71.2%	-\$2,802,841	-\$1,368,130	-\$2,735,407	-\$67,434	4,025,232,445,753	4,547,326,165	99.9%
mar	\$367,259	71.0%	\$260,582	-\$825,226	\$388,471	-\$127,889	5,978,134,380,942	16,355,526,950	99.6%
apr	-\$299,915	70.7%	-\$212,080	-\$671,939	-\$207,898	-\$4,182	6,193,793,295,468	17,487,243	99.6%
may	-\$2,271,255	70.5%	-\$1,600,458	-\$857,643	-\$1,678,464	\$78,006	7,092,041,292,889	6,085,001,860	99.6%
jun	-\$884,397	70.2%	-\$620,936	-\$818,192	-\$543,403	-\$77,533	7,163,098,675,738	6,011,434,058	99.5%
jul	-\$1,420,017	69.9%	-\$993,248	-\$843,200	-\$939,737	-\$53,511	7,187,803,185,810	2,863,479,409	99.5%
aug	-\$561,230	69.7%	-\$391,029	-\$786,679	-\$55,484	-\$335,546	7,712,471,054,324	112,590,834,588	98.1%
sep	\$1,163,790	69.4%	\$807,578	-\$609,539	\$591,855	\$215,723	9,186,612,967,291	46,536,465,790	97.9%
oct	\$387,414	69.1%	\$267,708	-\$521,814	\$1,510	\$266,198	9,458,524,677,896	70,861,235,761	97.2%
nov	-\$540,793	68.8%	-\$372,069	-\$508,201	-\$539,258	\$167,189	9,457,538,409,593	27,952,112,745	96.9%
dec	-\$1,479,432	68.5%	-\$1,013,259	-\$550,289	-\$960,226	-\$53,033	9,642,759,864,005	2,812,482,288	96.9%
jan 2000	-\$2,039,216	68.2%	-\$1,390,101	-\$614,890	-\$1,342,766	-\$47,335	10,225,944,833,831	2,240,612,832	97.1%
feb	\$645,187	67.8%	\$437,669	-\$539,707	\$503,004	-\$65,335	11,375,713,533,491	4,268,673,797	97.3%
mar	\$652,614	67.5%	\$440,464	-\$474,363	\$241,579	\$198,885	11,930,000,027,966	39,555,135,360	97.1%
apr	-\$541,433	67.1%	-\$363,499	-\$467,434	-\$466,742	\$103,243	11,931,561,210,070	10,659,017,636	97.0%
may	-\$1,068,100	66.8%	-\$713,151	-\$481,888	-\$493,727	-\$219,423	11,930,306,132,838	48,146,632,916	96.6%
jun	\$2,058,742	66.4%	\$1,366,732	-\$379,186	\$1,131,546	\$235,186	14,380,521,583,999	55,312,409,466	96.8%
jul	\$330,892	66.0%	\$218,361	-\$347,737	\$252,785	-\$34,424	14,770,252,110,514	1,185,000,888	96.9%
aug	\$1,286,669	65.6%	\$843,829	-\$288,158	\$332,224	\$511,605	15,239,874,204,598	261,739,328,750	95.3%
sep	\$837,482	65.2%	\$545,688	-\$248,451	\$1,075,368	-\$529,680	17,076,067,269,470	280,561,006,573	94.1%
oct	\$224,176	64.7%	\$145,083	-\$230,563	\$120,323	\$24,759	17,210,457,519,916	613,024,982	94.2%



CALCULATION OF THE COMPENSATORY HEDGE RATIO

910	930	935	940	945	915	955	960	965	970	975
Swap Notional Receive Rate	\$100,000,000 5.165%		Initial pay rate 5.165%	Adj. pay rate 5.175%		Bond (nominal): Bond (coupon interest rate):		\$100,000,000 6.000%		
920	No. of Months	PV of Profit	V of Adj. Profit	PV of 1 BP	No. of Months	PV at Initial Bond Yield 6.185%	PV at Initial Bond Yield 6.195%	PV of 1 BP	Compensatory Hedge Ratio	
4-Jan-99						\$98,806,923	\$98,742,910			
31-Jan-99	81	\$0	-\$56,887	\$56,887	99	\$98,806,923	\$98,742,910	\$64,013	88.9%	
feb	80	\$0	-\$56,299	\$56,299	98	\$98,816,190	\$98,752,670	\$63,520	88.6%	
mar	79	\$0	-\$55,708	\$55,708	97	\$98,825,505	\$98,762,480	\$63,025	88.4%	
apr	78	\$0	-\$55,114	\$55,114	96	\$98,834,868	\$98,772,342	\$62,526	88.1%	
may	77	\$0	-\$54,518	\$54,518	95	\$98,844,280	\$98,782,254	\$62,026	87.9%	
jun	76	\$0	-\$53,919	\$53,919	94	\$98,853,740	\$98,792,217	\$61,522	87.6%	
jul	75	\$0	-\$53,318	\$53,318	93	\$98,863,248	\$98,802,232	\$61,016	87.4%	
aug	74	\$0	-\$52,714	\$52,714	92	\$98,872,806	\$98,812,299	\$60,507	87.1%	
sep	73	\$0	-\$52,108	\$52,108	91	\$98,882,413	\$98,822,417	\$59,995	86.9%	
oct	72	\$0	-\$51,499	\$51,499	90	\$98,892,069	\$98,832,588	\$59,481	86.6%	
nov	71	\$0	-\$50,887	\$50,887	89	\$98,901,775	\$98,842,811	\$58,964	86.3%	
dec	70	\$0	-\$50,273	\$50,273	88	\$98,911,532	\$98,853,087	\$58,444	86.0%	
jan 2000	69	\$0	-\$49,656	\$49,656	87	\$98,921,338	\$98,863,416	\$57,922	85.7%	
feb	68	\$0	-\$49,036	\$49,036	86	\$98,931,195	\$98,873,799	\$57,397	85.4%	
mar	67	\$0	-\$48,414	\$48,414	85	\$98,941,103	\$98,884,235	\$56,868	85.1%	
apr	66	\$0	-\$47,789	\$47,789	84	\$98,951,062	\$98,894,725	\$56,337	84.8%	
may	65	\$0	-\$47,161	\$47,161	83	\$98,961,072	\$98,905,269	\$55,804	84.5%	
jun	64	\$0	-\$46,531	\$46,531	82	\$98,971,134	\$98,915,867	\$55,267	84.2%	
jul	63	\$0	-\$45,898	\$45,898	81	\$98,981,248	\$98,926,520	\$54,728	83.9%	
aug	62	\$0	-\$45,262	\$45,262	80	\$98,991,414	\$98,937,228	\$54,185	83.5%	
sep	61	\$0	-\$44,624	\$44,624	79	\$99,001,632	\$98,947,992	\$53,640	83.2%	
oct	60	\$0	-\$43,983	\$43,983	78	\$99,011,903	\$98,958,811	\$53,092	82.8%	
nov	59	\$0	-\$43,338	\$43,338	77	\$99,022,227	\$98,969,686	\$52,541	82.5%	
dec	58	\$0	-\$42,692	\$42,692	76	\$99,032,604	\$98,980,617	\$51,987	82.1%	
jan 2001	57	\$0	-\$42,042	\$42,042	75	\$99,043,034	\$98,991,604	\$51,430	81.7%	
feb	56	\$0	-\$41,390	\$41,390	74	\$99,053,519	\$99,002,648	\$50,870	81.4%	
mar	55	\$0	-\$40,735	\$40,735	73	\$99,064,057	\$99,013,749	\$50,308	81.0%	
apr	54	\$0	-\$40,077	\$40,077	72	\$99,074,650	\$99,024,908	\$49,742	80.6%	
may	53	\$0	-\$39,416	\$39,416	71	\$99,085,297	\$99,036,124	\$49,173	80.2%	
jun	52	\$0	-\$38,752	\$38,752	70	\$99,095,999	\$99,047,398	\$48,601	79.7%	
jul	51	\$0	-\$38,085	\$38,085	69	\$99,106,756	\$99,058,730	\$48,026	79.3%	
aug	50	\$0	-\$37,416	\$37,416	68	\$99,117,569	\$99,070,121	\$47,448	78.9%	
sep	49	\$0	-\$36,744	\$36,744	67	\$99,128,438	\$99,081,570	\$46,867	78.4%	
oct	48	\$0	-\$36,069	\$36,069	66	\$99,139,362	\$99,093,079	\$46,283	77.9%	
nov	47	\$0	-\$35,391	\$35,391	65	\$99,150,343	\$99,104,647	\$45,696	77.4%	
dec	46	\$0	-\$34,710	\$34,710	64	\$99,161,380	\$99,116,275	\$45,105	77.0%	
jan 2002	45	\$0	-\$34,026	\$34,026	63	\$99,172,474	\$99,127,962	\$44,512	76.4%	
feb	44	\$0	-\$33,339	\$33,339	62	\$99,183,626	\$99,139,711	\$43,915	75.9%	
mar	43	\$0	-\$32,649	\$32,649	61	\$99,194,835	\$99,151,519	\$43,316	75.4%	
apr	42	\$0	-\$31,956	\$31,956	60	\$99,206,102	\$99,163,389	\$42,713	74.8%	
may	41	\$0	-\$31,260	\$31,260	59	\$99,217,426	\$99,175,320	\$42,106	74.2%	
jun	40	\$0	-\$30,561	\$30,561	58	\$99,228,810	\$99,187,313	\$41,497	73.6%	
jul	39	\$0	-\$29,860	\$29,860	57	\$99,240,251	\$99,199,367	\$40,884	73.0%	
aug	38	\$0	-\$29,155	\$29,155	56	\$99,251,752	\$99,211,484	\$40,268	72.4%	
sep	37	\$0	-\$28,447	\$28,447	55	\$99,263,312	\$99,223,663	\$39,649	71.7%	
oct	36	\$0	-\$27,736	\$27,736	54	\$99,274,932	\$99,235,905	\$39,027	71.1%	
nov	35	\$0	-\$27,022	\$27,022	53	\$99,286,611	\$99,248,211	\$38,401	70.4%	
dec	34	\$0	-\$26,305	\$26,305	52	\$99,298,351	\$99,260,580	\$37,772	69.6%	
jan	33	\$0	-\$25,585	\$25,585	51	\$99,310,151	\$99,273,012	\$37,139	68.9%	
feb	32	\$0	-\$24,862	\$24,862	50	\$99,322,012	\$99,285,509	\$36,503	68.1%	
mar	31	\$0	-\$24,136	\$24,136	49	\$99,333,935	\$99,298,071	\$35,864	67.3%	
apr	30	\$0	-\$23,406	\$23,406	48	\$99,345,918	\$99,310,697	\$35,221	66.5%	
may	29	\$0	-\$22,673	\$22,673	47	\$99,357,964	\$99,323,388	\$34,575	65.6%	
jun	28	\$0	-\$21,938	\$21,938	46	\$99,370,071	\$99,336,145	\$33,926	64.7%	
jul	27	\$0	-\$21,199	\$21,199	45	\$99,382,241	\$99,348,968	\$33,273	63.7%	
aug	26	\$0	-\$20,457	\$20,457	44	\$99,394,474	\$99,361,857	\$32,616	62.7%	
sep	25	\$0	-\$19,711	\$19,711	43	\$99,406,769	\$99,374,813	\$31,957	61.7%	
oct	24	\$0	-\$18,963	\$18,963	42	\$99,419,129	\$99,387,835	\$31,293	60.6%	
nov	23	\$0	-\$18,211	\$18,211	41	\$99,431,551	\$99,400,925	\$30,626	59.5%	

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FIG - 9b -

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930	935	940	945	950	955	960	965	970	975
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
dec	22	\$0	-\$17,456	\$17,456	40	\$99,444,038	\$99,414,082	\$29,956	58.3%
jan	21	\$0	-\$16,698	\$16,698	39	\$99,456,589	\$99,427,308	\$29,282	57.0%
feb	20	\$0	-\$15,937	\$15,937	38	\$99,469,205	\$99,440,601	\$28,604	55.7%
mar	19	\$0	-\$15,172	\$15,172	37	\$99,481,886	\$99,453,963	\$27,923	54.3%
apr	18	\$0	-\$14,404	\$14,404	36	\$99,494,632	\$99,467,394	\$27,238	52.9%
may	17	\$0	-\$13,633	\$13,633	35	\$99,507,444	\$99,480,895	\$26,549	51.3%
jun	16	\$0	-\$12,858	\$12,858	34	\$99,520,322	\$99,494,465	\$25,857	49.7%
jul	15	\$0	-\$12,080	\$12,080	33	\$99,533,266	\$99,508,105	\$25,161	48.0%
aug	14	\$0	-\$11,299	\$11,299	32	\$99,546,277	\$99,521,816	\$24,462	46.2%
sep	13	\$0	-\$10,514	\$10,514	31	\$99,559,355	\$99,535,597	\$23,759	44.3%
oct	12	\$0	-\$9,726	\$9,726	30	\$99,572,501	\$99,549,449	\$23,052	42.2%
nov	11	\$0	-\$8,934	\$8,934	29	\$99,585,714	\$99,563,373	\$22,341	40.0%
dec	10	\$0	-\$8,139	\$8,139	28	\$99,598,996	\$99,577,369	\$21,626	37.6%
jan	9	\$0	-\$7,341	\$7,341	27	\$99,612,345	\$99,591,438	\$20,908	35.1%
feb	8	\$0	-\$6,539	\$6,539	26	\$99,625,764	\$99,605,578	\$20,186	32.4%
mar	7	\$0	-\$5,734	\$5,734	25	\$99,639,252	\$99,619,792	\$19,460	29.5%
apr	6	\$0	-\$4,926	\$4,926	24	\$99,652,809	\$99,634,079	\$18,730	26.3%
may	5	\$0	-\$4,113	\$4,113	23	\$99,666,436	\$99,648,440	\$17,996	22.9%
jun	4	\$0	-\$3,298	\$3,298	22	\$99,680,134	\$99,662,875	\$17,258	19.1%
jul	3	\$0	-\$2,479	\$2,479	21	\$99,693,902	\$99,677,385	\$16,517	15.0%
aug	2	\$0	-\$1,656	\$1,656	20	\$99,707,741	\$99,691,969	\$15,771	10.5%
sep	1	\$0	-\$830	\$830	19	\$99,721,651	\$99,706,629	\$15,022	5.5%
oct	0	\$0	-\$0	\$0	18	\$99,735,633	\$99,721,365	\$14,268	0.0%



CALCULATION OF THE CORRELATION BETWEEN SWAP AND RATIO HEDGE BOND

1005	1010	1015	1020	1025	1030	1035	1040	1045	1050
Swap Notional Receive Rate	\$100,000,000 5.480%	Hypothetical Rate 5.165%	Actual month-end CP Rate	Using CP at month end + 18 bps	Settlement on 13/2/00 annual No. of days of accrued interest	Market Yield (Updated)	Accrued Interest	Adjusted MTM (excl. accrued int.)	Monthly Change Adj. MTM
1007	No. of Months	(Per Counterparty) Swap MTM		Actual floating rate					
4-Jan-99							\$0	\$0	
31-Jan-99	81	-\$68,239			5+21	5.177%	\$0	-\$68,239	-\$68,239
	80	-\$3,476,946			5+20	5.795%	\$0	-\$3,476,946	-\$3,408,708
	79	-\$3,119,318			5+19	5.735%	\$0	-\$3,119,318	\$357,629
apr	78	-\$3,378,848			5+18	5.790%	\$0	-\$3,378,848	-\$259,530
	77	-\$5,369,450			5+17	6.181%	\$0	-\$5,369,450	-\$1,990,602
	76	-\$6,115,915			5+16	6.340%	\$0	-\$6,115,915	-\$746,465
jul	75	-\$7,332,810			5+15	6.600%	\$0	-\$7,332,810	-\$1,216,895
	74	-\$7,688,394			5+14	6.690%	\$0	-\$7,688,394	-\$355,584
	73	-\$6,795,503			5+13	6.521%	\$0	-\$6,795,503	\$892,891
oct	72	-\$6,498,778			5+12	6.475%	\$0	-\$6,498,778	\$296,725
	71	-\$6,994,406			5+11	6.596%	\$0	-\$6,994,406	-\$495,628
	70	-\$8,280,526			5+10	6.893%	\$0	-\$8,280,526	-\$1,286,120
jan 2000	69	-\$10,080,361			5+9	7.318%	\$0	-\$10,080,361	-\$1,799,835
-3,778,921	68	-\$4,043,515	5.76%	5.94%	16		\$23,671	-\$4,067,186	-\$288,265
	67	-\$3,590,935	5.93%	6.11%	47		\$47,644	-\$3,638,579	\$428,607
apr	66	-\$4,179,106	6.02%	6.20%	77		\$59,068	-\$4,238,174	-\$599,596
	65	-\$5,030,638	6.40%	6.58%	108		-\$29,589	-\$5,001,049	-\$762,874
	64	-\$3,302,205	6.53%	6.71%	138		-\$86,959	-\$3,215,246	\$1,785,803
jul	63	-\$3,120,536	6.49%	6.67%	169		-\$87,973	-\$3,032,563	\$182,683
	62	-\$2,144,735	6.47%	6.65%	200		-\$93,151	-\$2,051,584	\$980,979
	61	-\$1,446,734	6.48%	6.66%	230		-\$115,315	-\$1,331,419	\$720,165
oct	60	-\$1,381,003	6.48%	6.66%	261		-\$125,645	-\$1,255,358	\$76,061
1055	1060								
Bond (nominal):		\$100,000,000							
Bond (coupon interest rate):		6.000%							
	No. of Months	Computed Bond Value	Actual Libor Swap Yield	Constant Yield Differential	Constant Diff. Libor vs CP Swap	Effective Swap Yield	Bond Price If Yield Unchanged	Amort of Premium	Bond Value Mthly Change
	100	99.4455%	5.3500%	0.8350%	0.1000%	6.0850%	99.445%		
	99	99.5789%	5.3300%	0.8350%	0.1000%	6.0650%	99.450%	-0.004%	\$129,152
	98	95.6981%	5.9500%	0.8350%	0.1000%	6.6850%	99.454%	-0.004%	-\$3,885,065
	97	95.9746%	5.9100%	0.8350%	0.1000%	6.6450%	99.458%	-0.004%	\$272,117
	96	95.7043%	5.9600%	0.8350%	0.1000%	6.6950%	99.463%	-0.004%	-\$274,603
	95	93.4982%	6.3400%	0.8350%	0.1000%	7.0750%	99.467%	-0.004%	-\$2,210,463
	94	92.5176%	6.5200%	0.8350%	0.1000%	7.2550%	99.471%	-0.004%	-\$984,940
	93	91.0655%	6.7900%	0.8350%	0.1000%	7.5250%	99.476%	-0.004%	-\$1,456,525
	92	90.3700%	6.9300%	0.8350%	0.1000%	7.6650%	99.480%	-0.004%	-\$699,973
	91	91.5913%	6.7200%	0.8350%	0.1000%	7.4550%	99.485%	-0.004%	\$1,216,906
	90	92.0425%	6.6500%	0.8350%	0.1000%	7.3850%	99.489%	-0.004%	\$446,704
	89	91.4600%	6.7700%	0.8350%	0.1000%	7.5050%	99.494%	-0.004%	-\$586,935
	88	90.0503%	7.0500%	0.8350%	0.1000%	7.7850%	99.498%	-0.005%	-\$1,414,252
	87	88.0820%	7.4500%	0.8350%	0.1000%	8.1850%	99.503%	-0.005%	-\$1,972,825
	86	88.6868%	7.3500%	0.8350%	0.1000%	8.0850%	99.507%	-0.005%	\$600,266
	85	89.3888%	7.2300%	0.8350%	0.1000%	7.9650%	99.512%	-0.005%	\$697,408
	84	88.8328%	7.3600%	0.8350%	0.1000%	8.0950%	99.516%	-0.005%	-\$560,644
	83	87.7086%	7.6100%	0.8350%	0.1000%	8.3450%	99.521%	-0.005%	-\$1,128,849
	82	89.7694%	7.2100%	0.8350%	0.1000%	7.9450%	99.526%	-0.005%	\$2,056,146
	81	89.9617%	7.1900%	0.8350%	0.1000%	7.9250%	99.530%	-0.005%	\$187,682
	80	91.3301%	6.9300%	0.8350%	0.1000%	7.6650%	99.535%	-0.005%	\$1,363,626
	79	92.0525%	6.8000%	0.8350%	0.1000%	7.5350%	99.540%	-0.005%	\$717,703
	78	92.2553%	6.7745%	0.8350%	0.1000%	7.5095%	99.545%	-0.005%	\$198,052

Hypothetical Market
Yield
Source: Historical Yield
curve) - adjusted for the
no. of months
le 3yr + 5 months
Subtract 10 bp -
diff between Libor & CP

1105-1150

	1110	1115	1120	1125	1130	1135	1140	1145	1150
1105	Bond Value		X		Y		Square of Total Deviation		r ²
	Mthly Change		Hedged Bond MTM mthly change (24'25)		Swap MTM Mthly Change		Unexplained Dev (ineffect portion) $\frac{SSE}{SST}$		
	Compensatory Hedge Ratio		Life-to-date Hedged Bond MTM mthly change		Ineffective Portion of Swap MTM (26-27) Y minus X				
31-Jan-99	\$129,152.26	88.9%	\$114,775	\$114,775	-\$68,239	\$183,014	33,494,082,217	33,494,082,217	0.0%
	-\$3,885,065.11	88.6%	-\$3,443,390	-\$1,664,307	-\$3,408,708	-\$34,682	5,590,368,511,544	1,202,825,675	99.4%
apr	\$272,116.63	88.4%	\$240,525	-\$1,029,363	\$357,629	-\$117,103	8,508,787,459,252	13,713,151,144	99.4%
	-\$274,603.02	88.1%	-\$242,050	-\$832,535	-\$259,530	\$17,480	8,965,638,921,354	305,550,649	99.5%
	-\$2,210,462.81	87.9%	-\$1,942,913	-\$1,054,610	-\$1,990,602	\$47,689	10,017,355,557,819	2,274,239,706	99.5%
	-\$984,940.21	87.6%	-\$863,226	-\$1,022,713	-\$746,465	-\$116,760	10,104,905,247,299	13,632,971,273	99.4%
jul	-\$1,456,525.10	87.4%	-\$1,272,771	-\$1,058,436	-\$1,216,895	-\$55,876	10,139,126,053,220	3,122,163,284	99.3%
	-\$699,972.65	87.1%	-\$609,823	-\$1,002,359	-\$355,584	-\$254,239	10,570,905,440,040	64,637,569,666	98.7%
oct	\$1,216,905.70	86.9%	\$1,056,920	-\$773,550	\$892,891	\$164,029	13,615,528,055,091	26,905,452,573	98.8%
	\$446,704.08	86.6%	\$386,757	-\$657,520	\$296,725	\$90,032	14,608,652,245,315	8,105,749,570	98.9%
	-\$586,934.93	86.3%	-\$506,536	-\$643,794	-\$495,628	\$10,908	14,630,391,511,658	118,984,295	98.9%
	-\$1,414,251.55	86.0%	-\$1,216,516	-\$691,521	-\$1,286,120	\$69,604	15,017,331,881,621	4,844,741,921	98.9%
jan 2000	-\$1,972,824.61	85.7%	-\$1,691,287	-\$768,426	-\$1,799,835	\$108,547	16,154,834,795,302	11,782,547,084	98.9%
	\$600,266.50	85.4%	\$512,834	-\$676,907	-\$288,265	\$801,099	16,431,385,344,032	641,759,598,874	95.0%
	\$697,408.08	85.1%	\$593,728	-\$592,198	\$428,607	\$165,121	17,724,996,288,322	27,264,812,868	95.2%
apr	-\$560,643.81	84.8%	-\$475,575	-\$584,909	-\$599,596	\$124,021	17,741,418,480,487	15,381,221,905	95.1%
	-\$1,128,849.08	84.5%	-\$954,026	-\$606,622	-\$762,874	-\$191,151	17,722,088,018,870	36,538,798,199	94.9%
	\$2,056,145.66	84.2%	\$1,731,133	-\$476,747	\$1,785,803	-\$54,669	23,385,098,665,512	2,988,746,111	96.1%
jul	\$187,682.07	83.9%	\$157,402	-\$443,370	\$182,683	-\$25,281	23,859,522,711,161	639,115,931	96.2%
	\$1,363,626.40	83.5%	\$1,139,069	-\$364,248	\$980,979	\$158,089	25,932,101,749,143	24,992,276,858	96.4%
oct	\$717,703.15	83.2%	\$597,064	-\$318,472	\$720,165	-\$123,101	27,150,563,245,770	15,153,930,847	96.5%
	\$198,051.86	82.8%	\$164,070	-\$296,538	\$76,061	\$88,009	27,340,948,483,073	7,745,651,707	96.5%

Fig - 12a -

CALCULATION OF THE COMPENSATORY HEDGE RATIO

1210	1230	1235	1240	1245	1225	1250	1255	1260	1265	1270	1275
Swap Notional Receive Rate	\$100,000,000 6.578%		Initial pay rate 6.578%	Adj. pay rate 6.588%			Bond (nominal): Bond (coupon interest rate):		\$100,000,000 7.250%		
1220	No. of Months	PV of Profit	V of Adj. Profit	PV of 1 BP	No. of Months	PV at Initial Bond Yield 7.151%	PV at Initial Bond Yield 7.161%	PV of 1 BP	Compensatory Hedge Ratio		
30-Sep-99											
30-Sep-99	82	\$0	-\$54,921	\$54,921	120	\$100,709,823	\$100,637,839	\$71,574	76.7%		
oct	81	\$0	-\$54,389	\$54,389	119	\$100,705,803	\$100,634,229	\$71,162	76.4%		
nov	80	\$0	-\$53,854	\$53,854	118	\$100,701,759	\$100,630,597	\$70,747	76.1%		
dec	79	\$0	-\$53,316	\$53,316	117	\$100,697,690	\$100,626,943	\$70,330	75.8%		
jan 2000	78	\$0	-\$52,775	\$52,775	116	\$100,693,598	\$100,623,268	\$69,911	75.5%		
feb	77	\$0	-\$52,231	\$52,231	115	\$100,689,481	\$100,619,570	\$69,489	75.2%		
mar	76	\$0	-\$51,684	\$51,684	114	\$100,685,340	\$100,615,851	\$69,065	74.8%		
apr	75	\$0	-\$51,134	\$51,134	113	\$100,681,174	\$100,612,110	\$68,638	74.5%		
may	74	\$0	-\$50,580	\$50,580	112	\$100,676,983	\$100,608,346	\$68,208	74.2%		
jun	73	\$0	-\$50,024	\$50,024	111	\$100,672,768	\$100,604,559	\$67,777	73.8%		
jul	72	\$0	-\$49,465	\$49,465	110	\$100,668,527	\$100,600,750	\$67,342	73.5%		
aug	71	\$0	-\$48,903	\$48,903	109	\$100,664,261	\$100,596,919	\$66,905	73.1%		
sep	70	\$0	-\$48,338	\$48,338	108	\$100,659,969	\$100,593,064	\$66,466	72.7%		
oct	69	\$0	-\$47,769	\$47,769	107	\$100,655,652	\$100,589,186	\$66,023	72.4%		
nov	68	\$0	-\$47,198	\$47,198	106	\$100,651,309	\$100,585,286	\$65,579	72.0%		
dec	67	\$0	-\$46,623	\$46,623	105	\$100,646,940	\$100,581,362	\$65,131	71.6%		
jan 2001	66	\$0	-\$46,045	\$46,045	104	\$100,642,546	\$100,577,414	\$64,681	71.2%		
feb	65	\$0	-\$45,464	\$45,464	103	\$100,638,125	\$100,573,443	\$64,229	70.8%		
mar	64	\$0	-\$44,880	\$44,880	102	\$100,633,677	\$100,569,449	\$63,773	70.4%		
apr	63	\$0	-\$44,293	\$44,293	101	\$100,629,204	\$100,565,430	\$63,315	70.0%		
may	62	\$0	-\$43,702	\$43,702	100	\$100,624,703	\$100,561,388	\$62,854	69.5%		
jun	61	\$0	-\$43,109	\$43,109	99	\$100,620,176	\$100,557,321	\$62,391	69.1%		
jul	60	\$0	-\$42,512	\$42,512	98	\$100,615,621	\$100,553,230	\$61,925	68.7%		
aug	59	\$0	-\$41,911	\$41,911	97	\$100,611,040	\$100,549,115	\$61,456	68.2%		
sep	58	\$0	-\$41,308	\$41,308	96	\$100,606,431	\$100,544,975	\$60,984	67.7%		
oct	57	\$0	-\$40,701	\$40,701	95	\$100,601,795	\$100,540,811	\$60,510	67.3%		
nov	56	\$0	-\$40,091	\$40,091	94	\$100,597,131	\$100,536,621	\$60,033	66.8%		
dec	55	\$0	-\$39,477	\$39,477	93	\$100,592,440	\$100,532,407	\$59,553	66.3%		
jan	54	\$0	-\$38,860	\$38,860	92	\$100,587,720	\$100,528,168	\$59,070	65.8%		
feb	53	\$0	-\$38,240	\$38,240	91	\$100,582,973	\$100,523,903	\$58,584	65.3%		
mar	52	\$0	-\$37,616	\$37,616	90	\$100,578,197	\$100,519,612	\$58,096	64.7%		
apr	51	\$0	-\$36,989	\$36,989	89	\$100,573,392	\$100,515,297	\$57,604	64.2%		
may	50	\$0	-\$36,358	\$36,358	88	\$100,568,559	\$100,510,955	\$57,110	63.7%		
jun	49	\$0	-\$35,724	\$35,724	87	\$100,563,697	\$100,506,587	\$56,613	63.1%		
jul	48	\$0	-\$35,087	\$35,087	86	\$100,558,806	\$100,502,194	\$56,112	62.5%		
aug	47	\$0	-\$34,446	\$34,446	85	\$100,553,886	\$100,497,774	\$55,609	61.9%		
sep	46	\$0	-\$33,801	\$33,801	84	\$100,548,937	\$100,493,328	\$55,103	61.3%		
oct	45	\$0	-\$33,153	\$33,153	83	\$100,543,958	\$100,488,855	\$54,594	60.7%		
nov	44	\$0	-\$32,501	\$32,501	82	\$100,538,950	\$100,484,356	\$54,082	60.1%		
dec	43	\$0	-\$31,846	\$31,846	81	\$100,533,912	\$100,479,829	\$53,567	59.5%		
jan	42	\$0	-\$31,187	\$31,187	80	\$100,528,843	\$100,475,276	\$53,049	58.8%		
feb	41	\$0	-\$30,525	\$30,525	79	\$100,523,745	\$100,470,696	\$52,528	58.1%		
mar	40	\$0	-\$29,859	\$29,859	78	\$100,518,816	\$100,466,088	\$52,004	57.4%		
apr	39	\$0	-\$29,189	\$29,189	77	\$100,513,456	\$100,461,453	\$51,477	56.7%		
may	38	\$0	-\$28,516	\$28,516	76	\$100,508,266	\$100,456,790	\$50,946	56.0%		
jun	37	\$0	-\$27,839	\$27,839	75	\$100,503,045	\$100,452,099	\$50,413	55.2%		
jul	36	\$0	-\$27,158	\$27,158	74	\$100,497,793	\$100,447,380	\$49,876	54.5%		
aug	35	\$0	-\$26,474	\$26,474	73	\$100,492,509	\$100,442,633	\$49,336	53.7%		
sep	34	\$0	-\$25,786	\$25,786	72	\$100,487,194	\$100,437,858	\$48,793	52.8%		
oct	33	\$0	-\$25,094	\$25,094	71	\$100,481,847	\$100,433,054	\$48,247	52.0%		
nov	32	\$0	-\$24,398	\$24,398	70	\$100,476,469	\$100,428,222	\$47,698	51.2%		
dec	31	\$0	-\$23,698	\$23,698	69	\$100,471,058	\$100,423,360	\$47,145	50.3%		
jan	30	\$0	-\$22,995	\$22,995	68	\$100,465,615	\$100,418,470	\$46,589	49.4%		
feb	29	\$0	-\$22,287	\$22,287	67	\$100,460,140	\$100,413,551	\$46,030	48.4%		
mar	28	\$0	-\$21,576	\$21,576	66	\$100,454,632	\$100,408,602	\$45,468	47.5%		
apr	27	\$0	-\$20,861	\$20,861	65	\$100,449,091	\$100,403,624	\$44,902	46.5%		
may	26	\$0	-\$20,142	\$20,142	64	\$100,443,517	\$100,398,616	\$44,333	45.4%		
jun	25	\$0	-\$19,419	\$19,419	63	\$100,437,910	\$100,393,578	\$43,760	44.4%		
jul	24	\$0	-\$18,692	\$18,692	62	\$100,432,270	\$100,388,510	\$43,185	43.3%		
aug	23	\$0	-\$17,962	\$17,962	61	\$100,426,596	\$100,383,411	\$42,605	42.2%		

Fig - 12b -

1230	1235	1240	1245	1250	1255	1260	1265	1270	1275
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
sep	22	\$0	-\$17,227	\$17,227	60	\$100,415,146	\$100,373,123	\$42,023	41.0%
oct	21	\$0	-\$16,488	\$16,488	59	\$100,409,370	\$100,367,933	\$41,437	39.8%
nov	20	\$0	-\$15,745	\$15,745	58	\$100,403,560	\$100,362,712	\$40,847	38.5%
dec	19	\$0	-\$14,998	\$14,998	57	\$100,397,714	\$100,357,460	\$40,254	37.3%
jan	18	\$0	-\$14,247	\$14,247	56	\$100,391,835	\$100,352,177	\$39,658	35.9%
feb	17	\$0	-\$13,491	\$13,491	55	\$100,385,920	\$100,346,862	\$39,058	34.5%
mar	16	\$0	-\$12,732	\$12,732	54	\$100,379,969	\$100,341,515	\$38,454	33.1%
apr	15	\$0	-\$11,968	\$11,968	53	\$100,373,984	\$100,336,136	\$37,847	31.6%
may	14	\$0	-\$11,201	\$11,201	52	\$100,367,962	\$100,330,725	\$37,237	30.1%
jun	13	\$0	-\$10,429	\$10,429	51	\$100,361,905	\$100,325,282	\$36,623	28.5%
jul	12	\$0	-\$9,653	\$9,653	50	\$100,355,812	\$100,319,807	\$36,005	26.8%
aug	11	\$0	-\$8,872	\$8,872	49	\$100,349,682	\$100,314,299	\$35,383	25.1%
sep	10	\$0	-\$8,088	\$8,088	48	\$100,343,516	\$100,308,757	\$34,758	23.3%
oct	9	\$0	-\$7,299	\$7,299	47	\$100,337,313	\$100,303,183	\$34,130	21.4%
nov	8	\$0	-\$6,505	\$6,505	46	\$100,331,073	\$100,297,576	\$33,497	19.4%
dec	7	\$0	-\$5,708	\$5,708	45	\$100,324,796	\$100,291,935	\$32,861	17.4%
jan	6	\$0	-\$4,905	\$4,905	44	\$100,318,481	\$100,286,260	\$32,221	15.2%
feb	5	\$0	-\$4,099	\$4,099	43	\$100,312,129	\$100,280,552	\$31,577	13.0%
mar	4	\$0	-\$3,288	\$3,288	42	\$100,305,739	\$100,274,810	\$30,930	10.6%
apr	3	\$0	-\$2,473	\$2,473	41	\$100,299,311	\$100,269,033	\$30,278	8.2%
may	2	\$0	-\$1,653	\$1,653	40	\$100,292,845	\$100,263,222	\$29,623	5.6%
jun	1	\$0	-\$829	\$829	39	\$100,286,340	\$100,257,376	\$28,964	2.9%
jul	0	\$0	-\$0	\$0	38	\$100,279,796	\$100,251,495	\$28,301	0.0%

Fig-13-

CALCULATION OF THE CORRELATION BETWEEN SWAP AND RATIO HEDGE BOND

1305	1310	1315	1320	1325	1330	1335	1340	1345	1350
Swap Notional Receive Rate	\$100,000,000 6.233%	Hypothetical Rate 6.578%	Actual month-end CP Rate	Using CP at month end + 18 bps	Settlement on 15-Jan 15-Jul No. of days of accrued interest	Market Yield	Accrued Interest	Adjusted MTM (excl. accrued int.)	Monthly Change Adj. MTM
1307	No. of Months	(Per Counterparty) Swap MTM		Actual floating rate					
30-Sep-99							\$0	\$0	
30-Sep-99	82	\$0				6.578%	\$0	\$0	\$0
	81	\$333,504				6.516%	\$0	\$333,504	\$333,504
	80	-\$264,555				6.627%	\$0	-\$264,555	-\$598,060
dec	79	-\$1,824,166				6.923%	\$0	-\$1,824,166	-\$1,559,611
	78	-\$3,918,538				7.337%	\$0	-\$3,918,538	-\$2,094,372
	77	-\$3,381,203				7.238%	\$0	-\$3,381,203	\$537,335
mar	76	-\$2,779,125				7.124%	\$0	-\$2,779,125	\$602,078
	75	-\$3,413,984				7.259%	\$0	-\$3,413,984	-\$634,859
	74	-\$4,579,874				7.508%	\$0	-\$4,579,874	-\$1,165,891
jun	73	-\$2,616,296				7.109%	\$0	-\$2,616,296	\$1,963,578
	72	-\$2,402,537				7.070%	\$0	-\$2,402,537	\$213,760
	71	-\$1,186,585				6.822%	\$0	-\$1,186,585	\$1,215,951
sep	70	-\$480,605				6.677%	\$0	-\$480,605	\$705,980
-2,169,362	69	-\$2,100,078	6.48%	6.66%	108		-\$125,224	-\$1,974,854	\$194,508

1355	1360	1365	1370	1375	1380	1385	1390	1395
Bond (nominal):	\$100,000,000							
Bond (coupon interest rate):	7.250%							
No. of Months	Computed Bond Value	Actual Libor Swap Yield	Constant Yield Differential	Constant Diff. Libor vs CP Swap	Effective Swap Yield	Bond Price If Yield Unchanged	Amort of Premium	Bond Value Mthly Change
120	101.4250%	6.8300%	0.3210%	0.1000%	7.0510%	101.425%		\$0
120	101.4250%	6.8300%	0.3210%	0.1000%	7.0510%	101.425%	0.000%	\$600,463
119	102.0173%	6.7467%	0.3210%	0.1000%	6.9677%	101.417%	0.008%	-\$1,503,627
118	100.5054%	6.9572%	0.3210%	0.1000%	7.1782%	101.409%	0.008%	-\$1,273,266
117	99.2238%	7.1408%	0.3210%	0.1000%	7.3618%	101.400%	0.008%	-\$2,320,774
116	96.8947%	7.4856%	0.3210%	0.1000%	7.7066%	101.392%	0.008%	\$636,938
115	97.5232%	7.3939%	0.3210%	0.1000%	7.6149%	101.383%	0.008%	\$1,027,409
114	98.5422%	7.2437%	0.3210%	0.1000%	7.4647%	101.375%	0.008%	-\$871,258
113	97.6624%	7.3773%	0.3210%	0.1000%	7.5983%	101.367%	0.009%	-\$1,501,434
112	96.1524%	7.6114%	0.3210%	0.1000%	7.8324%	101.358%	0.009%	\$2,472,573
111	98.6164%	7.2365%	0.3210%	0.1000%	7.4575%	101.349%	0.009%	\$104,775
110	98.7125%	7.2232%	0.3210%	0.1000%	7.4442%	101.341%	0.009%	\$1,736,237
109	100.4401%	6.9629%	0.3210%	0.1000%	7.1839%	101.332%	0.009%	\$624,274
108	101.0556%	6.8700%	0.3210%	0.1000%	7.0910%	101.323%	0.009%	\$267,692
107	101.3145%	6.8300%	0.3210%	0.1000%	7.0510%	101.314%	0.009%	

1405	1410	1415	1420	1425	1430	1435	1440	1445	1450
	Bond Value Mthly Change	Compensatory Hedge Ratio	X Hedged Bond MTM mthly change (24'25)	aver'g. x Life-to-date Hedged Bond MTM mthly change	Y Swap MTM Mthly Change	Ineffective Portion of Swap MTM (26-27) Y minus X	Square of Total Deviation SST	Square of Unexplained Dev (ineffect portion) SSE	r ²
30-Sep-99	\$0.00	76.7%	0	229,467	\$0	0	63,478,928,851	15,732,832,515	75.2%
dec	\$600,462.93	76.4%	458,935	-228,549	\$333,504	125,431	504,676,712,291	298,687,349,311	37.7%
	-\$1,503,626.62	76.1%	-1,144,583	-412,720	-\$598,060	-546,523	2,076,897,321,496	353,285,391,893	67.9%
	-\$1,273,266.40	75.8%	-965,233	-680,559	-\$1,559,611	594,378	4,269,888,798,888	117,276,296,651	81.6%
	-\$2,320,774.27	75.5%	-1,751,915	-487,342	-\$2,094,372	342,456	5,705,816,121,978	3,432,549,673	86.2%
mar	\$636,938.08	75.2%	478,747	-307,886	\$537,335	-58,588	6,891,153,721,126	27,811,094,331	88.2%
	\$1,027,406.66	74.8%	768,845	-350,534	\$802,078	166,767	6,931,508,772,406	201,837,756	88.2%
	-\$871,257.52	74.5%	-649,066	-435,297	-\$634,859	-14,207	7,419,392,361,062	2,755,374,621	89.0%
jun	-\$1,501,434.31	74.2%	-1,113,399	-209,272	-\$1,165,891	52,492	12,899,803,490,559	19,217,411,768	93.5%
	\$2,472,573.07	73.8%	1,824,951	-183,251	\$1,963,578	-138,627	13,091,439,955,855	18,713,870,414	93.5%
	\$104,775.02	73.5%	76,961	-62,224	\$213,760	-136,799	14,979,915,613,565	2,821,573,034	94.3%
sep	\$1,736,237.04	73.1%	1,269,070	-22,514	\$1,215,951	53,118	15,564,479,116,344	63,489,285,989	94.1%
	\$624,273.86	72.7%	454,010	-7,071	\$705,980	-251,971	15,614,017,438,151	682,853	94.1%
	\$267,692.47	72.4%	193,681		\$194,508	-826			

FIG. 15

